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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/347,110	07/02/1999	MICHAEL P. WELLMAN	TDYNP001	3364

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ABDI, KAMBIZ

[REDACTED] ART UNIT      [REDACTED] PAPER NUMBER

3621

10

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Applicant No.	Applicant(s)
	09/347,110	WELLMAN, MICHAEL P.
	Examiner Kambiz Abdi	Art Unit 3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 June 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>16.5</u> . | 6) <input type="checkbox"/> Other: _____ .                                   |

<b>Interview Summary</b>	<b>Application N.</b>	<b>Applicant(s)</b>
	09/347,110	WELLMAN, MICHAEL P.
	Examiner Kambiz Abdi	Art Unit 3621

All participants (applicant, applicant's representative, PTO personnel):

- (1) Kambiz Abdi. (3) \_\_\_\_\_.  
 (2) Andre Gibbs. (4) \_\_\_\_\_.

Date of Interview: 30 June 2003.

Type: a) Telephonic b) Video Conference  
 c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.  
 If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 24.

Identification of prior art discussed: U.S. Patent no. 6,131,087 to Luke et al.

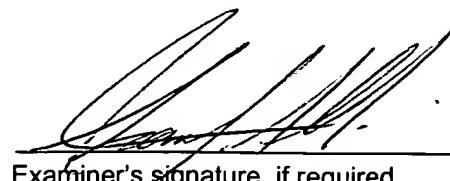
Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative attorney Gibbs discussed the applicant's invention and where in the claims this invention is disclosed. Attorney Gibbs pointed out that in claim 24 the system step is to create a "Value" based on the attributes that has been entered into the system. This value is based on the data input collected by the system from the user. Other steps to match the buyer and sellers together later use this "Value". Attorney Gibbs expanded further on the invention that this "Value" is critical on the bases that it correlates all the input variable attributes to generate it. Attorney Gibbs does not believe the Luke reference does disclose the same. Examiner does agree that a "Value" is generated by the system, but disagrees with attorney Gibbs that reference Luke does not disclose such a value. Luke clearly matches buyers and sellers based on an intersection of values that are calculated by the system. No agreement was reached. Examiner will further expand on this argument and remarks within the office action that will forwarded to the applicant.

#### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this section can be found in the prior office action.

The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented

Claims 1 and 16 have been amended.

Claims 1-30 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5 June 2003 has been entered.

#### ***Response to Arguments***

3. Applicant's arguments filed 5 June 2003 have been fully considered but they are not persuasive. Applicant's arguments that Luke et al do "not generate bids based on the attributes..." is not believed accurate; Luke et al discloses that solicitations that match are listed and transmitted to the originator of the offer data, columns 5 and 9, lines 40 – 44 and lines 1 – 8, respectively. Those solicitations are considered to be bids from which the originator can choose to do business. Applicant's statement that Luke et al do not perform the limitation of "selecting automatically a pair of compatible bids...having a highest difference" (emphasis added) is also not accurate, but is discussed further in the art rejection below. The art rejections of the last office action are essentially repeated below.

4. Examiner disagrees with the applicant on the merits of argument put forward by the applicant. Specifically the argument put forward for claims 24 and 16. Luke clearly discusses the fact the its system specifically accommodates additional aspects of transactions other than price and quality, in other words other attributes are considered in addition to select a match (See Luke column 3, lines 26-68). The issue

that has been raised by the applicant is that “Luke does not disclose the step of generating a bid value for each bid based upon the combination of attribute values and furthermore the combination of Luke and Buss does not teach this feature”. Luke clearly teaches the creation of or calculation of at least one point on a graph. This point is a representative of a value that needs to be arrived at by creating a value based on multiple attributes. Once this value has been calculated this value or values are compared in a graphical representation with other solicitors’ values to see if there are any matching points. The fact that a value has been displayed in a graphical form does not negate that the value still has to be calculated to create a point on a graphical representation of such value (Multivariable Calculus addresses this issue). As for the Buss’s bipartite bid value generation it is clear that method of creating a value from multiple numbers of attributes has been clearly disclosed within the prior art and its usefulness for matching two parties based on the bid value.

Therefore, the rejections of the claimed invention as they have been presented in their current claims form stands.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

Claims 1-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims as presently claimed and best understood by the examiner were considered in light of the new “Examination Guidelines for Computer-Related Inventions” and were found to be non-statutory. Discussion of the analysis of the claims under the guidelines follows.

The specification has been reviewed to see if the disclosed invention is in the technological art and that it has a practical use in the art. The review shows that the system uses a computerized method or system to match bidders with the sellers of goods online.

It is noted that method claims 1, 16, and 24 fail to recite/define a computer, machine or device that would render the claims in the technological arts and in statutory status.

Furthermore, as for claims 1, 16, and 24, the invention, as defined by the claims and as best understood by the examiner merely manipulate an abstract idea or perform a purely mathematical algorithm without any limitation to a practical application in the technological arts. However, the claimed invention manipulates data representing attributes and conditions, which are abstract and non-limiting. The invention does not require physical acts to be performed outside the computer independent of and following the steps to be performed by the programmed computer, where those acts involve the manipulation of tangible physical objects and results in the object having a different physical attribute or structure. See *Diamond v. Diehr*, 450 US at 187, 209 USPQ at 8. The steps of computer processing data related to attributes and conditions do not impose independent limitations on the scope of the claims beyond those required by the mathematical operation and abstract limitations because the attributes represented by symbols and conditions, which are purely abstract are not actually measured values of physical phenomena. *In re Galnovatch*, 595 F. 2<sup>nd</sup> at 41 n.7, 201 USPQ at 145 n.7; *In re Sarker*, 588 F.2<sup>nd</sup> at 1331, 200 USPQ at 135. The steps of "matching" have no direct effect on the physical world outside the computer. Thus, the claimed invention merely associates certain data with certain other data (attributes and conditions) and performs a mathematical algorithm without any limitation to a practical application as a result of the algorithm or outcome and is therefore deemed to be non-statutory.

Claims 2-15, 17-23, and 24-30 are rejected as being dependent claims to above mentioned claims that have been rejected under 35 U.S.C. 101. Same rejection rational is applied for rejecting these claims.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luke et al in view of Buss et al.

**Re claims 1 and 16:**

Luke et al disclose a method for automatically matching buyers and sellers in electronic market transactions such that Applicant's step of selecting a pair of bids reads on column 6, lines 12 – 19 and figure 2C. While Luke et al do not explicitly teach selecting based on the pair having the highest surplus, Luke et al does teach various conditions for matching. Applicant's claimed method of selecting based on highest surplus is considered to be old and well known; e.g., one scenario is that the credit standing required by the seller is minimal, however there are two buyers; one with an average credit standing and the other with an excellent credit standing. It would be most advantageous to the seller to choose the buyer with the excellent credit standing (highest surplus) as there is a better chance of the sale going through without any difficulties as opposed to choosing the buyer with the average credit standing. Further, in figure 2c and columns 8 and 9, lines 14 – 20 and 1 – 8, respectively, Luke discloses that the solicitations which fall in any levels 205, 206 and 207 are listed and supplied to the originator; the near matches (level 207) are what Applicant is referring to as "surplus" matches. Therefore, it is considered that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize any criteria desired for considering a buyer and seller a match.

Luke et al teach using weighting as is illustrated in figures 1a and 1b; i.e., any specified criteria of a sale or purchase requirement of a seller or buyer is inherently weighted. Using a bipartite graph as a method of determining matches is also considered old and well known; some examples are taught by

Buss et al. Therefore, it is considered that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a bipartite graph for the purpose of matching buyers with sellers as this type of graph is thought to be very useful for problems involving "matching" pairs. See Buss et al, column 1, lines 1- 29.

**Re claim 2:** Luke discloses that each buyer is associated with at most one maximal weighted matching bid and each seller is associated with at most one maximal weighted matching bid (FIG. 2).

**Re claim 3:** Luke discloses that said selecting the highest surplus pair of bids between each buyer and each seller includes determining a value associated with each bid of a buyer and each bid of a seller (FIG. 2).

**Re claim 5:** Luke discloses that the step of collecting at least one multi-attribute bid from one or more buyers and at least one multi-attribute bid from one or more sellers, each bid having a plurality of attributes specified by a buyer or seller (col. 4, lines 26-45; col. 6, lines 39-44).

**Re claim 6:** Luke discloses that each bid has at least one predetermined attribute (i.e., quantity, price, or logistics information).

**Re claim 7:** Luke discloses that said plurality of attributes are specified relative to a uniform measurement unit (col. 5, lines 32-36 and 60-66).

**Re claim 9:** Luke discloses that each bid has a price associated therewith, the price being expressed in terms of the uniform measurement unit (col. 6, lines 60-66).

**Re claim 10:** Luke discloses that said selecting the highest surplus pair of bids between each buyer and each seller includes determining a difference between the price of each buyer bid and the price of each seller bid (from col. 7, line 26 to col. 8, line 20).

**Re claim 11:** Luke (see FIGS. 1b and 2-2E) discloses that each bid has a plurality of attributes, at least a portion of the attributes being specified by a buyer or seller and wherein said determining the highest value pair of bids between each buyer and each seller further includes: generating bids for each buyer from the plurality of attributes; generating bids for each seller from the plurality of attributes; comparing attributes of each bid of each buyer with attributes of each bid of each seller.

**Re claim 12:** Luke (see FIGS. 1b and 2-2E) discloses that said determining the highest value pair of bids between each buyer and each seller further includes generating a list of matching bids between each buyer and each seller, each matching bid having compatible attributes.

**Re claim 13:** Luke (see FIGS. 1b and 2-2E) discloses that said highest surplus pair of bids between each buyer and each seller is selected from said list of matching bids.

**Re claim 14:** Luke (see FIG. 2C) discloses that said compatible attributes include a buyer price lower than or equal to a seller price.

**Re claim 15:** Luke (see FIG. 2E) discloses that said generating the list includes discarding pairs of bids between each buyer and each seller where a buyer price is lower than a seller price.

**Re claim 4:** Luke does not explicitly disclose a dynamic trading method having a step of selecting a pair of compatible-bids between each buyer and each seller, the pair of bids having a highest difference in bid values. However, in Fig. 1b and col. 6, lines 26-35 thereof, Luke discloses that the trading would happen at any point (i.e., from lowest difference in bid values to highest difference in bid values) in the shaded polyhedron 40 (i.e., a pair of compatible bids between each buyer and each seller). Thus, it would have been obvious design choice to employ any selecting steps including the claimed step for the claimed method as desired. See also the discussion of claim 1 above.

**Re claim 17:** Luke further discloses that each bid value is a price, the price being expressed in terms of the uniform measurement unit (col. 5, lines 32-36 and 60-66).

**Re claim 18:** Luke (see Figs. 1a and 1b) further discloses that said selecting the highest difference pair of bids includes determining a bid value associated with each bid of a buyer and each bid of a seller.

**Re claim 19:** Luke (see Figs. 1a and 1b) further discloses that said collecting the multi-attribute bid values include collecting a set of nominal attribute values, including a nominal bid value.

**Re claim 20:** Luke (see Figs. 1a and 1b) further discloses that said collecting the multi-attribute bid values further include collecting variances to the nominal attribute values of at least one attribute and a corresponding variance relative to said nominal bid value.

**Re claim 21:** Luke (see Figs. 1a and 1b) further discloses that said generating the multiattribute bids include determining the bid value for each combination of attribute values for each buyer and each seller.

**Re claim 22:** Luke further discloses that said bid value and said variances to the bid value are specified in a uniform measurement unit (col. 5, lines 32-36 and 60-66).

**Re claims 8 and 23:** Luke does not explicitly disclose that said uniform measurement unit is a monetary unit. However, it is well-known practice to convert a plurality of attributes to a monetary unit (e.g., converting a delivery destination to a monetary unit based on a distance or a payment date to a monetary unit based on an interest rate) to more accurately define the actual price of purchasing products and it would have been within the level of ordinary skill in the art to employ a monetary unit as a uniform measurement unit to facilitate the process of selecting a pair of bids between each buyer and each seller for the claimed method.

**Re claim 24:** Luke (see FIGS. 1-1b) discloses a method of generating multi-attribute bids, comprising:  
collecting at least one set of multi-attribute bid values, each set of multi-attribute bid values having a set of nominal attribute values including a nominal bid value, said collecting also includes collecting at least one variance to the nominal attribute value of at least one attribute and a corresponding variance relative to said nominal bid value; and generating a set of bids for each set of multi-attribute bid values, each bid having a different combination of attribute values based on corresponding variances and nominal attribute values.

Luke does not explicitly disclose the step of generating a bid value for each bid based upon the combination of attribute values. However, Buss discloses the use of a bipartite graph (Need to calculate a certain value that is used to find a point on a graph) for matching objects of one subset with objects of a different subset where multiple choices are permitted to provide a more efficient and faster process (col. 2, lines 14-21). Thus, it would have been within the level of ordinary skill in the art to modify the method of Luke by adopting the teaching of Buss to provide better efficiency and faster speed to the claimed

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method. Further, to use bipartite matching method as taught by Buss, a bid value for each bid based upon the combination of attribute values must be generated.

**Re claim 25:** Luke (see FIGS. 1a and 1b) further discloses that said collecting includes collecting at least one set of multi-attribute bid values from a buyer and collecting at least one set of multi-attribute bid values from a seller, the buyer and seller having a same set of attributes.

**Re claim 26:** Luke (see FIGS. 1a and 1b) further discloses that at least one attribute of said same set of attributes is selected from the group consisting of a predetermined buyer attribute and a predetermined seller attribute.

**Re claim 27:** Luke (see FIG. 2E) further discloses that said collecting includes collecting a bid value limit selected from the group consisting of a minimum bid value and a maximum bid value, said method further comprising discarding bids from said set of bids having a bid value outside of the bid value limit.

**Re claims 28, 29 and 30:** Luke discloses that the method of his is a computer implemented method. Further, as stated supra, the claimed method would have been obvious to one of ordinary skill in the art and the claimed computer program product would also have been obvious to one of ordinary skill in the art to practice the claimed method.

### ***Conclusion***

Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Abdi whose telephone number is (703) 305-3364. The examiner can normally be reached on 9:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

**Commissioner of Patents and Trademarks  
Washington, D.C. 20231**

or faxed to:

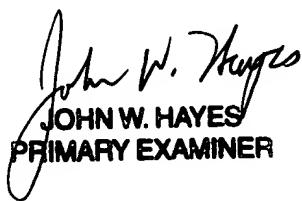
(703) 305-7687 [Official communications; including After Final communications labeled "Box AF"]

(703) 746-7749 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to:

**Crystal Park 5, 2451 Crystal Drive  
7th floor receptionist, Arlington, VA, 22202**

**Abdi/K  
July 9, 2003**



JOHN W. HAYES  
PRIMARY EXAMINER